



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,711	10/18/2005	Noel O'Neill	9052-218	8453
20792 7590 01/08/2008 MYERS BIGEL SIBLEY & SAJOVEC PO BOX 37428 RALEIGH, NC 27627			EXAMINER RALIS, STEPHEN J	
			ART UNIT 3742	PAPER NUMBER
			MAIL DATE 01/08/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/528,711

Applicant(s)

O'NEILL, NOEL

Examiner

Stephen J. Ralis

Art Unit

3742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-10 and 12-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-10 and 12-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 March 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 18 October 2007 has been entered.

Response to Amendment/Arguments

3. With respect to applicant's argument with respect to the Drawings, applicant stated that formal drawings were being submitted identify the baffle, "16A", however, there is no submission on the record addressing the objection. Therefore, the objection is still outstanding
4. Applicant's arguments filed 18 October 2007 have been fully considered but they are not persuasive.

Drawings

5. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because drawings are hand drawn. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

6. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "baffle 16a" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet"

pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

7. The drawings are objected to because the examiner cannot discern the location of the rear reflecting means (20) with respect to the location of the additional reflector means (21) due to Figure 2 having the rear reflecting means (20) being designated as a space as oppose to an element. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claim 5 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

10. In the instant case, the recitation of "further comprising an additional reflector, wherein the light source is between the additional reflector and the rear reflecting means" is not disclosed in the Specification. The Specification in paragraphs 16, 17 and 48 as well as the original recitation of claim 5, disclose an additional reflector being disposed behind the light source. There is no disclosure to the light source being between the reflectors only to the additional reflector being behind the light source. Even in examining Figures 1 and 2 of the instant application, the examiner cannot discern the location of the rear reflecting means (20) with respect to the location of the additional reflector means (21) since the rear reflecting means (20) is designated as a space in Figure 2. Therefore, the recitation of "further comprising an additional reflector, wherein the light source is between the additional reflector and the rear reflecting means" is deemed new matter.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 2, 4, 8 and 12-16 are rejected under 35 U.S.C. 102(b) as being anticipated by O'Neill (United Kingdom Publication No. 2298073A).

O'Neill'073 discloses a flame effect electric fire comprising: a housing (outer casing 1) adapted to be mounted on a substantially plane wall; heating means disposed in the housing operative to draw air into the housing, heat the air and expel the heated air (fan heater 2); and a flame simulating assembly mounted in the housing (simulated fuel 3); and comprising: a light source (light source 7); a viewing screen capable of diffusing and transmitting light (screen 4; page, 7 lines 18-35); a rear reflecting means disposed behind the viewing screen (reflecting panel 6; page 9, line 33 – page 10, line 19); and means for producing moving beams of light (rotor 8 which is mounted foil strips 9; page 7, lines 10-16; page 8, lines 18-25; page 10, lines 21-32), the light source being disposed below the reflecting means and behind the viewing screen (see Figure 3), the means for producing moving beams of light (indirectly –see Figure 3) is disposed in front of the light source and below the screen and light from the light source is reflected by the means for producing moving beams of light onto the reflecting means and is reflected by the reflecting means onto the screen to produce a perceptible image viewable on the screen (see Figure 3), and wherein the heating means expels air in a

generally vertically downwardly direction through an air expulsion aperture in an underside panel of the housing (see Figure 3).

O'Neill'073 further discloses the light from the light source being prevented from falling directly onto the viewing screen by means of a baffle (shield 10) mounted above the light source (page 9, lines 17-22; see Figure 3); the rear reflecting means comprising a sheet of material having reflecting regions and non-reflecting regions, the regions being generally flame shaped and the rear reflecting means having a concave reflecting surface (page 10, lines 14-19); the simulated fuel bed being disposed directly in front of the diffusing and transmitting screen (see Figure 3); and the screen comprising a reflective front surface configured such that a reflection of the fuel bed can be seen in the screen (page 7, lines 18-22).

With respect to the limitation of "adapted to be mounted on a substantially plane wall", the proposition of "adapted to" is being deemed functional language and if a reference has the structure and the controllability to perform the operation, the reference is complete as detail, please refer to MPEP §2111.04, ("Claim scope is not limited by claim language that does not limit a claim to a particular structure"; i.e. usage of "adapted to"; "configured to" being an equivalent is definition). Therefore, it is deemed that the structure of O'Neill (outer casing 1 and all of its structure) has the structure and controllability to perform the operation of being mounted on a substantially plane wall.

With respect to the limitation of the heating means expels air in a generally vertically downwardly direction through an air expulsion aperture in an underside panel of the housing, O'Neill'073 disclose an apparatus for simulating flames. O'Neill'073

explicitly disclose a fan heater (2) apparatus being on the lower side, bottom side and underside of the upper portion of the main simulating flame apparatus (see Figure 3). In addition, O'Neill'073 disclose the fan heater (2) in the underside portion/panel of the main simulating flame apparatus having an air expulsion aperture (grille 18) expelling air generally vertically downwardly direction through the air expulsion aperture (grille 18) of the underside portion/panel of the main simulating flame apparatus of the housing (1) (see arrows indicating air flow in Figure 3). While O'Neill'073 discloses the air being directed horizontally outward from the fan heater (2), the air expulsion aperture (grille 18) of the underside portion/panel of the main simulating flame apparatus of the housing (1) is clearly and explicitly directing and expelling the air in a generally vertically downwardly (see Figure 3). Therefore, the underside fan heater (2) underside external panel (grille 18) combination structure fully meets "the heating means expels air in a generally vertically downwardly direction through an air expulsion aperture in an underside panel of the housing" given its broadest reasonable interpretation.

As the reference meets all material limitations of the claims at hand, the reference is anticipatory.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

15. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over O'Neill (United Kingdom Publication No. 2298073A) in view of McDonald et al. (United Kingdom Publication No. 2276444A).

O'Neill'073 discloses an additional reflector being disposed behind the light source to reflect light beams at a different angle (auxiliary reflector 13; page 9, lines 8-12; see Figure 3), however, the claim differs from O'Neill'073 in calling for the light source being between the additional reflector and the rear reflecting means.

However, a light source being between the additional reflector and the rear reflecting means is known in the art. McDonald et al., for example, teach a illumination light source (7) being disposed in-between a rear reflector (shaped second reflector 3; page 4, lines 11-23; see Figure 1) and an additional reflector (primary source reflector 6; page 6, lines 15-23; see Figure 1) to provide an insulative or cooling effect for various components and to further provide light paths of a specific directionality, thereby improving the safety and visual effect of the flame simulating apparatus. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to

modify the additional reflector means of O'Niell'073 with the light source in-between the rear reflector and additional reflector configuration of McDonald et al. in order to provide an insulative or cooling effect for various components and to further provide light paths of a specific directionality, thereby improving the safety and visual effect of the flame simulating apparatus.

16. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over O'Neill (United Kingdom Publication No. 2298073A) in view Conroy et al. (U.S. Patent No. 3,742,189).

O'Neill'073 discloses all of the limitations of the claimed invention, as previously set forth, except for a mounting means for mounting the flame effect fire on a wall.

However, simulated heated fireplace assembly comprising mounting means for mounting simulated heated fireplace assembly on a wall is known in the art. Conroy et al., for example, teach an electric heated simulated fireplace assembly (12) that may be adapted for mounting within a larger receptacle which in turn is then mounted to the wall of a room; the corner thereof (column 4, lines 52-62) to provide a simulated fireplace assembly that may be used in many different rooms in a residence as well as in commercial establishments, thereby providing a more versatile apparatus to enhance and give pleasant atmosphere to the surroundings (column 1, lines 9-27). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the structure of O'Neill'073 with a wall mounting receptacle, as taught by Conroy

et al., in order to provide a simulated fireplace assembly that may be used in many different rooms in a residence as well as in commercial establishments, thereby providing a more versatile apparatus to enhance and give pleasant atmosphere to the surroundings.

17. Claims 3, 6 and 7 rejected under 35 U.S.C. 103(a) as being unpatentable over O'Neill (United Kingdom Publication No. 2298073A) in view of O'Neill (United Kingdom Publication No. 2372807A) and Fukue (Japanese Patent No. JP 06290762).

O'Neill'073 discloses all of the limitations of the claimed invention, as previously set forth, except for the light source comprising at least one halogen bulb or tungsten filament bulb having a maximum external dimension of not more than about 40mm; and the light source having a width of not more than 35mm and 15mm.

However, an apparatus for simulating a flame effect utilizing a halogen bulb, as described by O'Neill'807, is well known in the art. O'Neill'807 teaches a simulating flame assembly comprising a halogen lamp(14) to provide a low voltage light source (5 watts; page 2, lines 24-26), allowing the flame simulating device to operate at relatively low voltages (page 2, lines 6-8), thereby providing a more electrically safe flame simulating device (page 1, lines 27). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the light source of O'Neill'073 with the halogen light source of O'Neill'807 to provide a low voltage light source, allowing the flame simulating device to operate at relatively low voltages, thereby providing a more electrically safe flame simulating device.

In addition, Halogen bulbs having a maximum external dimension of not more than 40mm and having a width of not more than 15mm and 35 mm, as described by Fukue, is well known in the art. Fukue teaches a halogen bulb having a maximum external dimension of not more than 40mm (maximum dimension is the diameter being in the range of 12mm to 18mm and the width being 6mm to 10mm; English Constitution translation) to provide an effective region of an infrared reflecting while still satisfying the operational requirements, thereby providing a more desired halogen light source. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the halogen light source of O'Neill'073 with dimension limitations of Fukue to provide an effective region of an infrared reflecting while still satisfying the operational requirements, thereby providing a more desired halogen light source.

18. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Neill (United Kingdom Publication No. 2298073A) in view of Cornell (U.S. Patent No. 2,984,032).

O'Neill'073 discloses all of the limitations of the claimed invention, as previously set forth, except for the shaft being driveably connected at a first end thereof to a drive means for rotation of the shaft and being retained at a second end thereof in a supporting bracket, *the first end of the shaft being configured to be retained by the flexible bushing when the second end is released from the supporting bracket*, and the shaft being displaceable from an operative position thereby to permit access to the light source; and the shaft being connected to the drive means via a flexible bushing and the

second end of the shaft is releasably mounted in the bracket, the shaft being displaceable when desired by flexure of the flexible bushing.

However, a simulated flame apparatus having a motor connected to a shaft via a flexible bushing on one end and having the shaft releasably connected to a support bracket on the other end, as described by Cornell, is well known in the art. Cornell teaches an artificial fireplace apparatus comprising a drive means comprising a motor (34) mounted to a drive shaft (38), which extends inwardly through support leg (28). In addition, Cornell teaches a main shaft (32) being coupled to the drive shaft (38) on a first end via a resilient sleeve (40) made of rubber or the like with the shaft (32) extending through the apparatus to a second end in a support bracket being held by a suitable bearing (36). Cornell further Teaches that such a configuration provides a simple assembly, making it possible to make any necessary repairs or replacements (column 2, lines 33-43), thereby allowing the shaft to be disconnected without the use of any tools and easing maintenance thereof. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the motor/shaft coupling of the O'Neill apparatus with the flexible coupling mechanism of Cornell to provide a simple assembly, making it possible to make any necessary repairs or replacements, thereby allowing the shaft to be disconnected without the use of any tools and easing maintenance thereof.

With respect to the limitation of the shaft being driveably connected at a first end thereof via a flexible bushing to a drive means operative to rotate the shaft and being releasably retained at a second end thereof in a supporting bracket, *the first end of the*

shaft being configured to be retained by the flexible bushing when the second end is released from the supporting bracket, and the shaft being displaceable from its operative position on release of its second end by flexure of the flexible bushing, thereby to permit access to the light source, Cornell explicitly teaches frames legs (26, 28) providing support means for a horizontal shaft (32). In addition, Cornell teaches one end (second end) of the shaft (32) being journaled in a suitable bearing (36) in support leg (28) and the other end (first end) being coupled to a shaft (38) of motor (34) extending inwardly through support leg (28) towards support leg (26). Cornell further teach the motor shaft (38) being coupled to the driven shaft (32) by a resilient sleeve (40) of rubber or the like, making it an easy matter to disconnect the shaft when desired without the use of any tools. Clearly, Cornell teaches the removal of shaft (32) by disconnecting driven shaft (32) from the flexible bushing/resilient member (40) to provide a means for removal of the driven shaft (32) from bearing (36) or one would not provide for simplicity of assembly or providing the ability of making repairs or replacements of parts below the driven shaft (32) of the apparatus (i.e. bulb 16).

Therefore, the O'Neill'073 in view of Cornell driven shaft with a resilient member on one end of the driven shaft structure fully meets "the shaft is driveably connected at a first end thereof via a flexible bushing to a drive means operative to rotate the shaft and is releasably retained at a second end thereof in a supporting bracket, *the first end of the shaft being configured to be retained by the flexible bushing when the second end is released from the supporting bracket, and the shaft being displaceable from its*

operative position on release of its second end by flexure of the flexible bushing, thereby to permit access to the light source" given it broadest reasonable interpretation.

19. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over O'Neill (United Kingdom Publication No. 2298073A) in view of Cornell (U.S. Patent No. 2,984,032) as applied to claims 9 and 10 above, and further in view of Conroy et al. (U.S. Patent No. 3,742,189).

The O'Neill'073-Cornell flame effect electric fire combination discloses all of the limitations, as previously set forth, except for a mounting means for mounting the flame effect fire on a wall.

However, simulated heated fireplace assembly comprising mounting means for mounting simulated heated fireplace assembly on a wall is known in the art. Conroy et al. teach an electric heated simulated fireplace assembly (12) that may be adapted for mounting within a larger receptacle which in turn is then mounted to the wall of a room; the corner thereof (column 4, lines 52-62) to provide a simulated fireplace assembly that may be used in many different rooms in a residence as well as in commercial establishments, thereby providing a more versatile apparatus to enhance and give pleasant atmosphere to the surroundings (column 1, lines 9-27). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the structure of the O'Neill'073-Conroy flame effect electric fire combination with a wall mounting receptacle, as taught by Conroy et al., in order to provide a simulated

fireplace assembly that may be used in many different rooms in a residence as well as in commercial establishments, thereby providing a more versatile apparatus to enhance and give pleasant atmosphere to the surroundings.

20. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over O'Neill (United Kingdom Publication No. 2298073A) in view of Edwards et al. (U.S. Patent No. 2,984,032).

O'Neill'073 discloses all of the limitations of the claimed invention, as previously set forth, except for an air intake aperture in the underside external panel of the housing and the heating means being configured to draw air into the housing through the air intake aperture in the underside external panel of the housing.

However, an air intake in the underside of a housing and the heating means being configured to draw air into the housing via the air intake is known in the art. Edwards et al., for example, teach an electrical heating element arrangement for an air flow heater (Title) comprising a housing including a fan (11) mounted for rotation about an axle (12) so that air is drawn from the underside of the fan and expelled radially outwardly into the housing (column 3, lines 20-27). Edwards et al. further teach that such a configuration provides a means for the air from the fan to pass over the heating elements of the heating assembly before exiting from the housing through nozzle (13) (column 3, lines 31-34), thereby improving the overall operational efficiency of the heater assembly. It would have been obvious to one of ordinary skill in the art at the

time of the invention was made to modify the fan heater assembly of O'Neill'073 with the air intake on the underside of the housing/assembly in order to provide a means for the air from the fan to pass over the heating elements of the heating assembly before exiting from the housing through nozzle (13) (column 3, lines 31-34), thereby improving the overall operational efficiency of the heater assembly.

With respect to the limitation of an air intake aperture in the underside external panel of the housing and the heating means being configured to draw air into the housing through the air intake aperture in the underside external panel of the housing, O'Neill'073 explicitly discloses a fan heater (2) mounted and functioning in the underside portion/panel of the main simulating flame apparatus with the air expulsion aperture (grille 18) expelling air generally vertically downwardly direction through the air expulsion aperture (grille 18) of the underside portion/panel of the main simulating flame apparatus of the housing (1). Edwards et al. explicitly teach the necessity and requirement for a fan heater apparatus to have air being drawn from the underside of the fan (11). Clearly with the requirement for air to be drawn from the underside of the fan (11) of Edwards et al. and with the existing structure of O'Neill'073, the combination structure would require an air take aperture in the underside portion/panel of the main simulating flame apparatus of O'Neill'073 to accommodate the air being drawn for the underside of the fan (11) of the fan heater or the fan heater apparatus would not function properly. Therefore since O'Neill'073 discloses a fan heater (2) mounted and functioning in the underside portion/panel of the main simulating flame apparatus with the air expulsion aperture (grille 18) expelling air generally vertically downwardly

direction through the air expulsion aperture (grille 18) of the underside portion/panel of the main simulating flame apparatus of the housing (1) and Edwards teaches the necessity for air to be drawn from the underside of such heater which would require an air intake aperture in the structure, O'Neill in view of Edwards et al. fully meets "an air intake aperture in the underside external panel of the housing, wherein the heating means is configured to draw air into the housing through the air intake aperture in the underside external panel of the housing" given its broadest reasonable interpretation.

Remarks

21. With respect to applicant's argument that O'Neill'073 teaches away from an air expulsion aperture in an underside panel of the housing, the examiner respectfully disagrees. O'Neill'073 explicitly disclose a fan heater (2) apparatus being on the lower side, bottom side and underside of the upper portion of the main simulating flame apparatus (see Figure 3). In addition, O'Neill'073 disclose the fan heater (2) in the underside portion/panel of the main simulating flame apparatus having an air expulsion aperture (grille 18) expelling air generally vertically downwardly direction through the air expulsion aperture (grille 18) of the underside portion/panel of the main simulating flame apparatus of the housing (1) (see arrows indicating air flow in Figure 3). While O'Neill'073 discloses the air being directed horizontally outward from the fan heater (2), the air expulsion aperture (grille 18) of the underside portion/panel of the main simulating flame apparatus of the housing (1) is clearly and explicitly directing and expelling the air in a generally vertically downwardly (see Figure 3). Therefore, the

underside fan heater (2) underside external panel (grille 18) combination structure fully meets "the heating means expels air in a generally vertically downwardly direction through an air expulsion aperture in an underside panel of the housing" given its broadest reasonable interpretation.

22. With respect to the applicant's argument that Cornell does not disclose that the first end of the shaft is configured to be retained by the flexible bushing when the second end is released from the supporting bracket as recited in Claim 9, the examiner respectfully disagrees. Cornell explicitly teaches frames legs (26, 28) providing support means for a horizontal shaft (32). In addition, Cornell teaches one end (second end) of the shaft (32) being journaled in a suitable bearing (36) in support leg (26) and the other end (first end) being coupled to a shaft (38) of motor (34) extending inwardly through support leg (28) towards support leg (26). Cornell further teach the motor shaft (38) being coupled to the driven shaft (32) by a resilient sleeve (40) of rubber or the like, making it an easy matter *to disconnect* the shaft when desired without the use of any tools. Clearly, Cornell teaches the removal of shaft (32) by *disconnecting* driven shaft (32) from the /flexible bushing/resilient member (40) to provide a means for removal of the driven shaft (32) from bearing (36) or one would not provide for simplicity of assembly or providing the ability of making repairs or replacements of parts below the driven shaft (32) of the apparatus (i.e. bulb 16). Therefore, the O'Neill'073 in view of Cornell driven shaft with a resilient member on one end of the driven shaft structure fully meets "the shaft is driveably connected at a first end thereof via a flexible bushing to a drive means operative to rotate the shaft and is releasably retained at a second end

thereof in a supporting bracket, *the first end of the shaft being configured to be retained by the flexible bushing when the second end is released from the supporting bracket,* and the shaft being displaceable from its operative position on release of its second end by flexure of the flexible bushing, thereby to permit access to the light source" given it broadest reasonable interpretation.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen J. Ralis whose telephone number is 571-272-6227. The examiner can normally be reached on Monday - Friday, 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu Hoang can be reached on 571-272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:
10/528,711
Art Unit: 3742

Page 21

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Stephen J Ralis
Examiner
Art Unit 3742

SJR
December 28, 2007



TU BA HOANG
SUPERVISORY PATENT EXAMINER